

We Claim:

1. A video game system, comprising:
 a game program executing system executing a game program;
 one or more controllers supplying user inputs to the game program executing system;
 an interface between the controllers and the game program executing system, the interface system being programmable to periodically poll the controller without involvement of the game program executing system.

2. The video game system according to claim 1, wherein the interface is programmable to poll the controllers a predetermined number of times between each vertical blanking interval.

3. The video game system according to claim 1, wherein the interface is programmable to poll the controllers based on a number of video lines.

4. The video game system according to claim 1, wherein the interface polls the status of the controllers

5. The video game system according to claim 4, wherein the status of the controllers includes data indicative of player inputs.

6. The video game system according to claim 4, wherein the player inputs comprise button presses.

7. The video game system according to claim 4, wherein the player inputs comprise positions of a user manipulable joystick.

8. The video game system according to claim 4, wherein the status of the controllers includes error data.

1 9. The video game system according to claim 8, wherein the error data is
2 indicative of no response from a controller in response to a transfer of data thereto.

1 10. The video game system according to claim 8, wherein the error data is
2 indicative of a data collision.

1 11. The video game system according to claim 8, wherein the error data is
2 indicative of the game program executing system receiving more than a
3 predetermined amount of data from the controller.

1 12. The video game system according to claim 8, wherein the error data is
2 indicative of the game program executing system receiving less than a
3 predetermined amount of data from the controller.

1 13. The video game system according to claim 1, the interface further
2 comprises:

3 a double buffer for storing data transferred between the game program
4 executing system and the controller.

1 14. The video game system according to claim 13, the interface further
2 comprising:

3 a communication RAM for storing data transferred between the game
4 program executing system and the controller.

1 ~~13~~ ¹³ 15. The video game system according to claim ~~14~~, the interface further
2 comprising:

3 selectors for selectively connecting the controllers to either the double buffer
4 or the communication RAM.

1 ^{Sub A12} 16. The video game system according to claim 1, the interface
2 comprising:

a modem for pulse width modulating/demodulating data transferred between the game program executing system and the controller.

17. The video game system according to claim 1, the controller including a vibration circuit for vibrating a housing of the controller.

18. The video game system according to claim 1, the controller including a read/write memory.

19. A video game system, comprising:
 a game program executing system executing a game program;
 a controller supplying user inputs to the game program executing system;
 and
 an interface interfacing between the game program executing system and the controller, the interface including communication circuitry operable in a first mode in which data of a fixed size is communicated between the game program executing system and the controller and in a second mode in which data of variable size is communicated between the game program executing system and the controller.

20. The video game system according to claim 19, the interface further comprising:

a communication memory for storing the variable size data.

21. The video game system according to claim 20, the interface further comprising:

a double buffer for storing the fixed size data.

20 ~~22~~. The video game system according to claim ¹⁹ ~~21~~, the interface further comprising:

3 selectors for selectively connecting the controllers to either the double buffer
4 or the communication RAM.

1 Sub A15/ 23. The video game system according to claim 19, the interface
2 comprising:

3 a modem for pulse width modulating/demodulating data transferred between
4 the game program executing system and the controller.

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Add B7)

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